



S/N 09/451,802

#13  
PATENT

03/25/04

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Murali Sundar

Examiner: Melvin Pollack

Serial No.: 09/451,802

Group Art Unit: 2141

Filed: December 1, 1999

Docket No.: 884.132US1

Title: Networked Computer Management with a Mobile Software Agent

Assignee: Intel Corporation

Customer No. 21186

**APPEAL BRIEF TO THE BOARD OF  
PATENT APPEALS AND INTERFERENCES OF THE  
UNITED STATES PATENT AND TRADEMARK OFFICE**

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**Appellant's Brief on Appeal**

This brief is presented in Appeal from the final rejection of claims 1-21 of the above identified application. The Final Office Action from which the Appellant hereby appeals was mailed on July 16, 2003.

The appeal brief is filed in triplicate. Please charge the requisite fee of \$330 as set forth in 37 C.F.R. § 1.17(f) to Deposit Account 19-0743. Appellant respectfully requests reversal of the Examiner's rejection of pending claims 1-21. Appellant reserves the right to request an Oral Hearing at a later date.

**1. Real Party in Interest**

The real party in interest of the above-captioned patent application is the assignee, Intel Corporation, a corporation organized and existing under and by virtue of the laws of the State of Delaware, and having an office and place of business at 2200 Mission College Blvd., Santa Clara, California, 95052.

**2. Related Appeals and Interferences**

There are no other appeals or interferences known to the Appellant which will have a bearing on the Board's decision in the present appeal.

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### **3. Status of the Claims**

Claims 1-21 are pending in the present application, and stand under Final Rejection. Claims 1-21 were rejected under 35 USC § 103(a), and are the subject of the present appeal.

### **4. Status of Amendments**

Claims 1, 7, 8, 13, 16-18, 20, and 21 have been amended in prosecution to more clearly express that the preferred state of the networked computers comprises a hardware or software configuration of the computers, and to reflect the nature of the mobile software agent, as are described in greater detail in the specification. No amendments are pending.

### **5. Summary of the Invention**

In one example embodiment of the invention, a method of managing the state of networked computers is provided. A preferred state is specified, and selected networked computers to be maintained in the preferred state are defined. The networked computers are monitored for deviation from the preferred state, and are brought to the preferred state if they deviate by a mobile software agent that travels autonomously between the selected networked computers. The preferred state of the networked computers comprises a hardware or software configuration state of the computers.

### **6. Issue Presented for Review**

1. Whether claims 1, 2, 7, 8 and 16-21 are unpatentable under 35 USC § 103(a) over Adams (U.S. 5,963,944) in view of Meyer et al. (U.S. 6,289,378).
2. Whether claims 3-6 and 10-15 are unpatentable under 35 USC § 103(a) over Adams and Meyer et al. in view of Walsh (U.S. 6,233,601).
3. Whether claim 9 is unpatentable under 35 USC § 103(a) over Adams and Walsh in view of Johnson et al. (U.S. 5,987,135).

## **7. Grouping of Claims**

Each of the claims presented here for review has similar limitations or depends from a claim having similar limitations to Claim 1. All claims are therefore appropriately reviewed together for purposes of this appeal, and are believed patentable based on the arguments presented here relative to pending Claim 1.

## **8. Argument**

### ***1) The Applicable Law***

To sustain a rejection under 35 U.S.C. §102(e), The reference **(or references when combined)** must teach or suggest all the claim elements. M.P.E.P. § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2143. The Examiner must avoid hindsight. *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

Further, the fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990); MPEP § 2143.01. The prior art must provide a motivation or reasons for the worker in the art, without the benefit of the specification, to make the necessary changes in the reference device. *Ex parte Chicago Rawhide MFG. Co.*, 223 USPQ 351, 353 (Bd. Pat. Ap. & Inter. 1984). MPEP § 2144.05(VI)B.

## ***2) Discussion of the Rejections***

1. Whether claims 1, 2, 7, 8 and 16-21 are unpatentable under 35 USC § 103(a) over Adams (U.S. 5,963,944) in view of Meyer et al. (U.S. 6,289,378).

Adams describes a system and method in which autonomous agents move independently among computers to index data, replicate data, and manage the size and content of data files stored on networked systems. Although Adams teaches for example specifying a preferred state of data file sizes in systems, it does not teach many other elements of the present claims, including specifying a preferred state of the networked computer system, particularly where the preferred state comprises hardware and software configuration as is recited in the pending claims, but merely addresses distributed data management.

The Office Actions argue that the claimed specifying a preferred state of a networked computer is met by Adams (col. 9, ln. 46-50). The cited section, along with col. 3, ln. 65 - col. 4, ln. 7, describe examination of a data index file to determine whether it exceeds a maximum value, and splitting the index file among multiple nodes if the maximum value is exceeded. It does not address a subject relating to specification of a preferred state of a networked computer itself, or more specifically to specification of a preferred hardware or software configuration, as is recited in the pending claims. Reliance upon this to provide motivation for combination with other references is therefore also insufficient, as is explained later in greater detail.

It is further argued that the claimed defining of selected networked computers to be maintained in such a preferred state is anticipated by Adams (col. 5, ln. 3-15). This cited section of Adams describes how memory stores data used by agents in determining actions at a node, which includes indicating which other nodes are likely to contain index files of a certain type that are candidates for aggregation. It does not comprise a list of computers to be maintained in a specified preferred state, but describes only other nodes likely to have index data similar to the present node.

Adams is again cited (col. 2, ln. 30-40) to show anticipation of the claimed monitoring the selected networked computers for deviation from the preferred state. The cited section of Adams again fails to discuss the relevant element of the pending claims, even ignoring the lack

of previous definition of such a preferred state of a computerized system or selection of networked computers. This section of Adams simply discusses use of uncoordinated autonomous agents to provide a scalable, decentralized system for managing data and index distributed among network nodes. It does not address monitoring the state of the nodes for any particular state or for any other purpose.

Finally, Adams is cited (col. 3, ln. 65 – col. 4, ln. 7) as teaching the claimed bringing selected networked computers that deviate from the preferred state to the preferred state via the mobile software agent that travels autonomously between computers. The cited section teaches splitting an index file that exceeds a maximum size among multiple nodes, and fails to address selected computers, specification of a preferred hardware or software configuration, monitoring selected computers for deviation from the specified hardware or software configuration, or bringing those selected networked computers deviating from a preferred hardware or software configuration state to the preferred hardware or software configuration state.

The cited Meyer reference discloses a computer management system that uses an agent on a computer system to provide management of various settings on the computer using a web browser or other remote configuration access program. Meyer fails to discuss any other aspect of the pending claims, including defining selected networked computers to be maintained in the preferred state as is recited in the pending claims.

Besides lacking the claimed features of the present invention in combination, the combination of Meyer and Adams lacks the required motivation to combine in the references themselves. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2143. The Examiner must avoid hindsight. *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). Here, the present Office Action intentionally misreads the claimed specifying a hardware or software configuration of a networked computer as equivalent to specifying a preferred index data file size, and uses this as the sole link between Adams and Meyer. As discussed above in greater detail, Adams and Meyer are directed toward different tasks, and nowhere explicitly suggest combination with one another or reasonably suggest the success of such combination.

Further, the fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990); MPEP § 2143.01. The prior art does not suggest desirability of combination, or otherwise contemplate the present invention. The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reasons for the worker in the art, without the benefit of the specification, to make the necessary changes in the reference device. *Ex parte Chicago Rawhide MFG. Co.*, 223 USPQ 351, 353 (Bd. Pat. Ap. & Inter. 1984). MPEP § 2144.05(VI)B.

Because the cited art fails in combination to teach various elements of the pending claims, such as defining selected networked computers to be maintained in the preferred state and other such elements as described in greater detail above, the claims are believed to be in condition for allowance. Further, combination of the cited references has been shown to be improper for the various reasons given above. Applicant therefore believes the pending claims are in condition for allowance, and respectfully requests reversal of the rejection of the pending claims 1, 2, 7, 8 and 16-21, and of the claims that depend therefrom.

2. Whether claims 3-6 and 10-15 are unpatentable under 35 USC § 103(a) over Adams and Meyer et al. in view of Walsh (U.S. 6,233,601). These claims depend from and are grouped for purposes of this appeal with Claim 1, and are believed to be in condition for allowance for the reasons stated above.

3. Whether claim 9 is unpatentable under 35 USC § 103(a) over Adams and Walsh in view of Johnson et al. (U.S. 5,987,135). Claim 9 depends from and is grouped for purposes of this appeal with Claim 1, and is believed to be in condition for allowance for the reasons stated above.

**APPLICANT'S BRIEF ON APPEAL**

Serial Number: 09/451,802

Filing Date: December 1, 1999

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Assignee: Intel Corporation

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**9. Conclusion**

Applicant believes the claims are in condition for allowance, and request withdrawal of the rejections to the pending claims. It is respectfully submitted that the cited art fails to anticipate the present invention or to render it obvious, and that the claimed invention is therefore patentably distinct from the cited art. It is respectfully submitted that claims 1-21 should therefore be allowed, and reversal of the Examiner's rejections of pending claims 1-21 is respectfully requested.

Respectfully submitted,

MURALI SUNDAR

By his representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

P.O. Box 2938

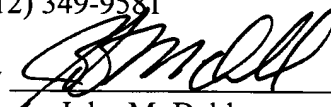
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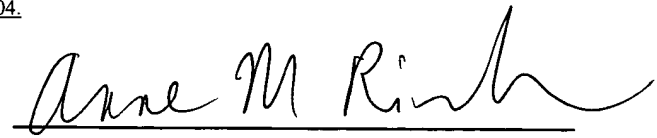
John M. Dahl

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Anne M. Richards

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Signature

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**Appendix A: Pending Claims**

1. (Previously Presented) A method of managing the state of networked computers, comprising:
  - specifying a preferred state, wherein the preferred state comprises at least one of hardware or software configuration of the networked computers;
  - defining selected networked computers to be maintained in the preferred state;
  - monitoring the selected networked computers for deviation from the preferred state; and
  - bringing the selected networked computers that deviate from the preferred state to the preferred state via a mobile software agent that travels autonomously between the selected networked computers.
2. (Original) The method of claim 1, wherein specifying a preferred state comprises:
  - defining a preferred software configuration of a computer; and
  - defining actions needed to bring the computer to the desired software configuration if the computer is not in the preferred software configuration.
3. (Original) The method of claim 1, wherein defining selected computers to be maintained in the preferred state comprises generating a list of networked computers to be maintained in the preferred state.
4. (Original) The method of claim 3, wherein the mobile software agent autonomously travels between the selected networked computers by traveling to the computers on the list of networked computers to be maintained in the preferred state.
5. (Original) The method of claim 1, wherein defining selected computers to be maintained in the preferred state comprises defining a network space of computers to be maintained in the preferred state.



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6. (Original) The method of claim 5, wherein the mobile software agent autonomously travels between the selected networked computers by traveling to the computers in the networked space of computers to be maintained in the preferred state.
  7. (Previously Presented) The method of claim 1, wherein monitoring the selected networked computers for deviation from a preferred state is performed via a mobile monitoring agent, wherein the mobile monitoring agent comprises a mobile software agent.
  8. (Previously Presented) The method of claim 7, wherein the mobile monitoring agent travels autonomously between the selected networked computers.
  9. (Original) The method of claim 1, wherein the mobile software agent that brings the selected networked computers that deviate from the preferred state to the preferred state also performs the monitoring the selected networked computers for deviation from the preferred state by first monitoring each selected networked computer it travels to for deviation from the preferred state and subsequently bringing the computer to the preferred state if it deviates from the preferred state.
  10. (Original) The method of claim 1, wherein the mobile software agent travels autonomously between the selected networked computers by transferring itself from a present computer to a next computer, and erasing itself from the present computer after it has successfully transferred itself to the next computer.
  11. (Original) The method of claim 1, further comprising providing a trip report from the mobile software agent to a host system.
  12. (Original) The method of claim 1, wherein the mobile software agent is further operable to travel to computers not among the selected networked computers to transfer data.

13. (Previously Presented) The method of claim 12, wherein the mobile software agent maintains a trip report that is reported to a host computer upon return of the mobile software agent to the host computer.
14. (Original) The method of claim 12, wherein the mobile software agent sends a trip report to the host computer periodically as it travels between the selected networked computers.
15. (Original) The method of claim 1, wherein the selected networked computers have a mobile software agent host program thereon to facilitate mobile software agent travel and execution.
16. (Previously Presented) A machine-readable medium with instructions stored thereon, the instructions operable when executed to cause a computer to:
  - receive and store data defining a preferred state of computers, wherein the preferred state comprises at least one of hardware or software configuration of the networked computers;
  - receive and store data defining selected networked computers to be maintained in the preferred state;
  - generate a mobile software agent that travels autonomously between the selected networked computers and brings the selected networked computers that deviate from the preferred state to the preferred state.

17. (Previously Presented) A machine-readable medium with instructions stored thereon, the instructions operable when executed to cause a computer to:

generate a mobile software agent that travels autonomously between selected networked computers that deviate from a preferred state to the preferred state, wherein the preferred state comprises at least one of hardware or software configuration of the networked computers.

18. (Previously Presented) A machine-readable medium with instructions stored thereon, the instructions operable when executed to cause a computer to:

monitor a first networked computer for deviation from a preferred state wherein the preferred state comprises at least one of hardware or software configuration of the networked computers;

bring the first networked computer to the preferred state if it deviates from the preferred state; and

copy the executable instructions operable to perform the monitoring, bringing to a preferred state, and copying functions to a second networked computer.

19. (Original) The machine-readable medium of claim 18, with further instructions operable when executed to cause a computer to remove the executable instructions operable to perform the monitoring, bringing to a preferred state and copying functions from the first networked computer after the instructions are successfully copied to the second networked computer.

20. (Previously Presented) A computerized networked computer management system, comprising:

a networked computer server, operable to generate a mobile software agent that travels autonomously between networked computers, monitors the networked computers for deviation from a preferred state, and brings the selected computers that deviate from the preferred state to the preferred state, wherein the preferred state comprises at least one of hardware or software configuration of the networked computers.

21. (Previously Presented) A method of managing the state of networked computers, comprising:

specifying a preferred state, wherein the preferred state comprises at least one of hardware or software configuration of the networked computers;

defining selected networked computers to be maintained in the preferred state;

monitoring the selected networked computers for deviation from the preferred state; and

bringing the selected networked computers that deviate from the preferred state to the preferred state via a mobile software agent that is sent to the selected networked computers.